

## REPORT ON BOILERS.

No. 12134

Received at London Office APR 21 1938

Date of writing Report

192

When handed in at Local Office 20. 4. 1938

Port of Belfast

No. in Survey held at Reg. Book.

Belfast

Date, First Survey 14<sup>th</sup> October, 1937 Last Survey 14<sup>th</sup> April 1938

(Number of Visits 11)

Gross Tons  
Net

Master

Built at

By whom built

Yard No.

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

Belfast

By whom made

Harland & Wolff L<sup>td</sup>

Boiler No. 1008G When made 1938

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles L<sup>td</sup>

(Letter for Record S)

Total Heating Surface of Boilers

2473  $\frac{1}{2}$   $\frac{1}{2}$ 

Is forced draught fitted Yes

Fuel fired Oil

No. and Description of Boilers

One multitubular cylindrical S.E.

Working Pressure 180 lbs

Test pressure

Tested by hydraulic pressure to

320 lbs

Date of test 23-3-38

No. of Certificate 1044

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One 3" C.S. double opening Marine imp<sup>4</sup> H.L.

Area of each set of valves per boiler

per Rule 15.85+2

Pressure to which they are adjusted

Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

14'-6"

Length 11'-6"

Shell plates: Material S

Tensile strength 29/33 tons/in<sup>2</sup>

Thickness

1 1/4"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

DR.

Ang. seams

T.R. DBS

Diameter of rivet holes in

circ. seams 1 1/32"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams

plate 60.5

rivets 48.1

Percentage of strength of circ. intermediate seam

plate 60.5

rivets 48.1

Percentage of strength of longitudinal joint

plate 85.6

rivets 87

combined 88.6

Working pressure of shell by Rules 184 lbs

Thickness of butt straps

outer 3/32"

inner 1/32"

No. and Description of Furnaces in each Boiler 3 Marine

Material

S

Tensile strength 26/30 tons

Smallest outside diameter 3'-7 1/8"

Length of plain part

top

bottom

Thickness of plates

crown 9/16"

bottom

Description of longitudinal joint Wild.

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules 189 lbs

End plates in steam space: Material

S

Tensile strength 26/30

Thickness 1 5/16"

Pitch of stays 16 1/2/18 1/2"

How are stays secured double nuts &amp; washers &amp; curved turn end plates

Working pressure by Rules 186 lbs

Tube plates: Material

front S

back

Tensile strength 26/30 tons

Thickness 7/8"

1 3/4"

Mean pitch of stay tubes in nests 8.25"

Pitch across wide water spaces 14"

Working pressure front 188 lbs

back 276 lbs

Girders to combustion chamber tops: Material S

Tensile strength 28/32

Depth and thickness of girder

at centre 8 3/4"

1 3/4"

Length as per Rule 33"

Distance apart 10 1/4"

No. and pitch of stays

in each 30

7 7/8"

Working pressure by Rules 187 lbs

Combustion chamber plates: Material S

Tensile strength

26/30 tons

Thickness: Sides 3/4"

Back 3/4"

Top 3/4"

Bottom 7/8"

Pitch of stays to ditto: Sides

7 7/8" x 8 1/2"

Back 7 3/4" x 8 1/2"

Top 10 1/4" x 7 7/8"

Are stays fitted with nuts or riveted over Margin stays nutted

Working pressure by Rules 190 lbs

Front plate at bottom: Material S

Tensile strength 26/30 tons

Thickness

7/8"

Lower back plate: Material S

Tensile strength 26/30 tons

Thickness 7/8"

Pitch of stays at wide water space 13"

Are stays fitted with nuts or riveted over Margin stays nutted

Working Pressure 233 lbs

Main stays: Material S

Tensile strength 28/32 tons

Diameter

At body of stay 2 3/4"

Over threads 3 1/2"

No. of threads per inch 6

Area supported by each stay 296 in<sup>2</sup>

Working pressure by Rules 220 lbs

Screw stays: Material S

Tensile strength 26/30 tons

Diameter

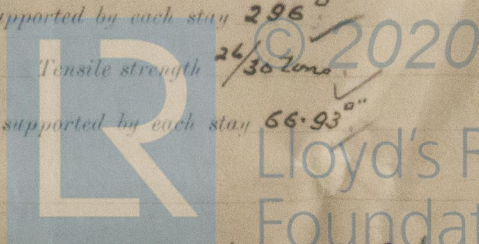
At turned off part 1 1/2"

Over threads

No. of threads per inch 10

Area supported by each stay 66.93 in<sup>2</sup>

ipping.



Lloyd's Register Foundation

W1168-0286

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

For HARLAND AND WOLFF, LIMITED

The foregoing is a correct description,

*H. Harland* Manufacture

Secretary

1937  
Dates of Survey { During progress of work in shops - - - Oct 14 Dec 16 22 23. 24 Apr 14  
while building { During erection on board vessel - - - Jan 5. 21 Feb 7 Mar 27

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 12<sup>th</sup> Apr 1938

Total No. of visits 11

This boiler has been constructed in accordance with the Rules & to an approved design. The materials & workmanship are good. It has been subjected to hydraulic pressure test with satisfactory results. It is to be installed in a vessel building at Govan  
C. H. H.

See fls. JE 5997